

# Shrey Industries

---

To,  
**Director (Industry-II)**  
Ministry of Environment Forest and Climate Change,  
Indira Paryavaran Bhavan,  
Jorbagh Road,  
New Delhi-110003

August 28, 2020

**Sub: Environmental Clearance for Proposed Establishment of Synthetic Organic Chemicals -Pigment at Plot No. 7 & 8, S.No.111 & 112, Dhanot, Taluka - Kalol, Dist – Gandhinagar (Gujarat) by M/s Shrey Industries**

**Ref: ADS: Minutes of EAC (Industry 2 Sector) held during December 30-31, 2019 & January 01, 2020, Proposal No-[IA/GJ/IND2/85152/2018, IA-J-11011/369/2018-IA-II(I)]**

Respected Sir,

This is reference with above referred ADS, we are providing information as per below.

- 1. The Committee noted that Consultant has not followed the generic structure of the EIA Notification, 2006. EIA report to be revised as per the terms of reference granted for the project, and shall conform to Appendix III of the EIA Notification, 2006.**

We have prepared and submitted EIA report as per the generic structure of the EIA Notification, 2006 include 12 chapters.

- 2. The Committee noted that there are various deficiencies in Form 2 uploaded by the PP and accordingly Revised Form 2 shall be submitted incorporating all the information related to the project.**

We have modified Form 2 as per the modified EIA Report with remove some discrepancy between EIA report and Form 2.

- 3. EIA Report mentioned the details of Schedule I species, however Form 2 is mentioned as NIL.**

We have modified Form 2 as per the revised EIA Report with remove some discrepancy between EIA report and Form 2. Also submit the Conservation Plan to **Deputy Conservator of Forest, Gandhinagar, Gujarat**. Copy of acknowledgment is enclosed herewith as **Annexure-I** and modified EIA Report and Form-2 on MoEFCC portal.

# Shrey Industries

---

**4. PP uploaded the PH proceeding of M/s Wonder Cement Rajasthan; however the project is located at State of Gujarat.**

We surprise that **Wonder Cement Rajasthan** is not our client and we have no record of PH minutes in our computer, which was reflected on MoEF portal. Might be chance to portal related issue. We have once again uploaded MoM of PH in Form No-2 correctly.

**5. Water quality analysis report submitted is wrong.**

We have recheck the calculation of water Analysis and found some analytical mistake. We have no alternate to recheck the same water sample hence, we have recollect all surface and ground water sample from same location and analyzed the same and incorporated in revised EIA report. Copy of Analysis report is enclosed for your ready reference as **annexure-I**. For better calibration/check for correctness, we have used reference of **Standard Method for Water and Waste Water Analysis, 23<sup>rd</sup> Addition, Section-1030 E, Page no- 1-23 & 1-24.**

**As per the above reference;**

**Calculated TDS = 0.6(Alkalinity)+Na<sup>+</sup> + K<sup>+</sup> + Ca<sup>+2</sup> + Mg<sup>+2</sup> + Cl<sup>-</sup> + SO<sub>4</sub><sup>-2</sup> + NO<sub>3</sub><sup>-</sup> + F<sup>-</sup>.**

**Note:** If pH is < 9.0, the **hydroxyl ionic** conductance is insignificant, if pH is > 5.0, the **hydrogen ionic** conductance is insignificant,). We have compare the **Measured TDS** **Calculated TDS** using following reference.

**Comparison/standardization of water Analysis in terms of TDS:**

**2. Measured TDS=Calculated TDS**

The Measured TDS concentration should be larger than the calculated one because many not include a calculated significant contributor. If the measured value is smaller, then both the higher ion sum and measured value are suspected: the sample should be re-analyzed. If the measured TDS concentration is more than 20% higher than the calculated one, then the low ion sum is suspect; selected constitutions should be re-analyzed.

The acceptable ration is as follows.

$$1.0 < \frac{\text{Measured TDS}}{\text{Calculated TDS}} < 1.2$$

Based on the above reference, all the results are found in acceptable ratio. Result with summary is provided as **Annexure-I**

# Shrey Industries

---

## **6. Alternate source of water to be submitted as tanker supply may not be allowed.**

We will be sourced tanker water supply from authorized water supply of GWSSB (Gujarat Water supply and Sewerage Board), A Government of Gujarat Undertaking. For water supply, we have approached to Office of The Executive Engineer, GWSSB, Public Health Works Division, Gandhinagar. As per the information provided by concern officer, nearest Water Treatment plant/Water sump of GWSSB from our industry is Village-Pratappura, Taluka-Kalol, which have capacity of 80 MLD and current utilization is 80 MLD. So no issue to supply of 50 KLD water for industrial uses though tanker with prevailing rate and regulation of the Board. Also advice to apply for water connection before two month of actual requirement to avoid minimum commitment charges of 70% of demand water.

In such situation, I committed to not start Industrial work without required water permission even EC and CTE granted by concern authorities.

## **7. Effluent treatment mechanism with plan for Zero Liquid Discharge.**

Our Proposal is Zero Liquid Discharge by way of evaporation of RO reject with small quantity i.e.18.3 KLD at Common Spray Dying Facility approved by Gujarat Pollution Control Board though GPS Molded tanker with real time monitoring by GPCB. Additionally, very close proximity i.e. 0.3 Km from our project boundary. There are no any industries or major road in between Industries and Common Spray Dying Facility.

## **8. Plan for Corporate Environmental Responsibility.**

CER plan is covered in EIA report on **page no-294 of EIA Report**. Covered matter is summarized below.

Due to the proposed Project, facilities are likely to grow with the development. There is a positive effect due to improved communication and health services, which have lead to economic prosperity, better educational opportunities and access to better health and family welfare facilities. There will be beneficial effect on human settlement due to employment opportunities from the industry. Local quality of life will be improved. This factor combined with all other mitigation measures like proper treatment and disposal of wastewater, hazardous waste and gaseous emission has minimized the adverse impact on ecology and had a beneficial impact on human settlement and employment opportunities.

There has been a beneficial impact on the local socio-economic environment. The

# Shrey Industries

---

increasing industrial activity will boost the commercial and economic status of the locality up to some extent.

Shrey Industries not only carries out business but also understands the obligations towards the society. The Project proponent is well aware of the obligations towards the society and to fulfill the social obligations, unit will employ semi-skilled and skilled labor from the nearby villages for the proposed project as far as possible. Unit will also try to generate maximum indirect employment in the nearby villages by appointing local contractors during construction phase as well as during operation phase. Unit will be contributed reasonably as part of their CSR & CER activity. Unit will spend about 2.5% of the project cost for CSR activities & 2 % of the project cost for CER activities in nearby villages. CSR & CER activities identified and planned at present are described below Table.

## **CER ACTIVITIES PLANNING & BUDGET**

**Project Location:** Shrey Industries

**CER Plan Period:** Five Years from the date of commercial production from expansion unit.

**Project cost :** Rs. 3.0 Crores

**CER Budget :** Rs. 6.0 Lakhs [4.5 % of the Project cost] for 5 Years

**Total Budget CER:** Rs. 13.5 Lakhs for 5 Years

# Shrey Industries

S. No	CER Activity	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year	Total (Rs. in Lakhs)	Proposed Action Plan
	Drinking water supply to nearby villages.	1.5	1.5	1.5	1.5	1.0	7.0	Proposed to establish drinking water RO plants for supply in Ankhola, Achrasan, Karannagar, Lunasan, Vansol, Dhanot, Chhatral, Bileshwarpara, Indrad, Irana villages.
	Educational Aid to the school students	1.0	1.0	1.0	1.0	0.5	4.5	Supply of books, uniforms and other educational aids like computers with internet facilities to nearby village schools.
	Health Camps	0.30	0.30	0.20	0.10	0.10	1.0	Health camps will be conducted every year for people of nearby villages and distribution of necessary medicines.
	Green Belt at Common space available in village including School of Dhanot village	0.30	0.30	0.20	0.10	0.10	1.0	We will develop green belt at Dhanot and other village with help of local people.
<b>Total CER Budget</b>		<b>3.10</b>	<b>3.10</b>	<b>2.9</b>	<b>2.7</b>	<b>1.7</b>	<b>13.5</b>	--

# Shrey Industries

To considering the small plant with limited CER Budget, we have reduced the time line for utilization of CER fund, which is summarized below.

S. No	CER Activity	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	Total (Rs. in Lakhs)	Proposed Action Plan
1	Drinking water supply to nearby Villages.	3.5	3.5	7.0	Proposed to establish drinking water RO plants for supply in Ankhola and Dhanot villages.
2	Educational Support to the school students	2.5	2.0	4.5	Supply of books, uniforms and other Educational aides like computers with internet facilities to nearby village schools.
3	Health Camps	0.5	0.5	1.0	Health camps will be conducted every year for people of nearby villages and distribution of necessary medicines.
4	Green Belt at Common space available in village including School of Dhanot village	0.5	0.5	1.0	We will develop green belt at Dhanot and other village with help of local people.
<b>Total CER Budget</b>		<b>7.0</b>	<b>6.5</b>	<b>13.5</b>	--

## 9. Action plan with commitments in time bound manner for issues raised during public hearing.

The public hearing was conducted by GPCB on 27.09.2019 on the basis of the draft EIA/EMP incorporating the Terms of References. Point raised during the public hearing by participants is summarized below with reply/action taken by project proponent.

### Points raised during public hearing

Statement of issues raised by the public and response of the project proponent with action plan is as follows.					
Sr. No.	Name and Address	Point Represented	Reply from Project Proponent	Time Bound Action Plan proposed	Budgetary provision
1.	Anilkumar Patel Village: Dhanot	<ul style="list-style-type: none"> <li>We hope that due to the proposed project, people of surrounding villages will get employments.</li> </ul>	Project proponent informed that, 08 technical & 07 non-technical people will get the employment	Immediately after start the work of project.	No need to make financial provision.
2.	Yogeshbhai Rambhai Patel	Which kind of arrangement will be	Project proponent informed that,	Immediately with Industrial	Around Budgetary

# Shrey Industries

	Village: Dhanot	provided for discharge of generated wastetwaer from unit?	generated industrial effluent will be treated in ETP and treated effluent will be sent to RO plant, for further treatment from that RO permeate water will be reused & RO reject water will be sent to Common Spray Dryer at Chatral Environment System Pvt. Ltd. – Dhanot for Spray Dying	operation	20.0 Lakhs earmark as capital cost and 180 Lakhs earmark as operation/ recurring cost to achieve ZLD of entire industrial effluent
--	-----------------	---	--	-----------	--

Based on the above submission, we requesting you to considered our case in upcoming meeting and oblige.

Thanking you in anticipation of your kind consideration.

Yours Faithfully,  
**For, Shrey Industries**



**Partner**

o/c

# Shrey Industries

To,  
**Deputy Conservator of Forests,**  
Gandhinagar Van Vibhag,  
Nr. GH-4 Circle nursery,  
Sector-17, Gandhinagar-382017

Date: 20.08.2020

**Sub:** Submission of wildlife Conservation plan for Schedule-I

**Ref:** TORs assigned to **SHREY INDUSTRIES** for proposed project for manufacturing of Pigment Green 7 at Survey No. 111 & 112, Plot No. 7 & 8, Village: Dhanot, Ta: Kalol, Dist: Gandhinagar (Gujarat) TOR Letter No.: IA-J-11011/369/2018-IA-II(I), Dated-31/12/2018

Respected Sir,

We, **Shrey Industries** with reference of cited subject and reference vide which, we would like to inform herewith we have prepared the Wildlife Conservation plan from Ecology and Biodiversity expert with reference to the ToR provided by the Ministry of Environment, Forest & Climate Change (MoEFCC), New Delhi.

During the appraisal of Environmental Clearance application, Member Secretary, MoEFCC, Industry-II has raised ADS (Additional Details Short) on 30.12.2019 that we need to conservation plan for schedule - I fauna to district Forest department to their approval.

We hereby enclosed copy of conservation plan of Schedule-I species found in the study area along with budgetary provision. Request to consider/approve our attached conservation plan.

Your co-operation in the matter will be highly appreciated.

Thanking you,  
Yours Faithfully,

For, **Shrey Industries**  
**SHREY INDUSTRIES**

*ashish patel*

**PARTNER**

**Partner**

*Patel: 17/8/20*  
વડા મુખ્ય મંત્રી,  
ગાંધીનગર વન વિભાગ,  
સેક્ટર-૧૭-૩૮૨૦૧૭,  
ગાંધીનગર.

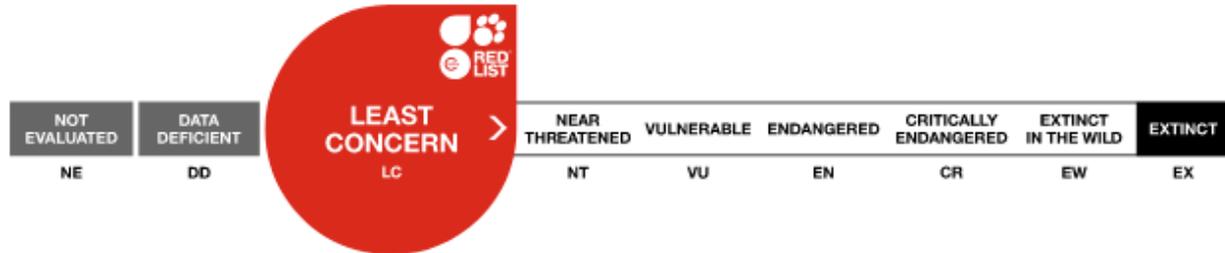
# Shrey Industries

## Conservation Plan for Peacock or Indian Peafowl (*Pavo Cristatus*)

### Schedule – I Bird Species

#### **Protection Status:**

**As per IUCN:** Classified as Least Concern (LC) on the IUCN Red List (1) and listed on Appendix II of CITES 3.



**Population Trend:** Stable

**Habitat:** Terrestrial

**Habitat Type:** Forest, Scrubland, Artificial/Terrestrial

**Generation Length in Year:** 6.1

**Movement Patterns:** Non Migrant

#### **Indian Peafowl (*Pavocristatus*)**

<b>Scientific classification</b>	
Kingdom:	Animalia
Phylum:	Chordata
Class:	Aves
Order:	Galliformes
Family:	Phasianidae
Genus:	Pavo
Species:	Pavocristatus
Common Name:	Indian Peafowl
Vernacular Name:	Mor

# Shrey Industries

---

**Introduction:** The Indian Peafowl (*Pavo Cristatus*) is a resident breeder in the Indian subcontinent. The bird was declared as the National Bird of and its widespread distribution in the country. The species is found in dry semi-desert grasslands, shrub and deciduous forests. It forages and nests on the ground but roosts on top of trees. It eats seeds, insects, fruits, small mammals and reptiles. The Indian Peafowl is a ground nesting bird and it lays a clutch of 4-8 eggs which take 28 days to hatch. The eggs are light brown and are laid every other day usually in the afternoon. The male does not assist with the rearing, and is polygamous. Poaching of Peacock for their feathers and poisoning by feeding on pesticide treated seeds are known threats to wild birds. Under the law, collection of tail feather is allowed only when bird sheds them. The Indian peafowl is under various threats that include the demand for feathers and wild meat, conflict with farmers during cropping season, increased use of chemical fertilizer and pesticide and habitat degradation.

**Habitat:**

The Indian Peafowl is found mainly on the ground in open scrub forest or on land under cultivation where they forage for berries, grains but will also prey on snakes, lizards, and small rodents. Their loud calls make them easy to detect, and in forest areas often indicate the presence of a predator such as a tiger. They forage on the ground in small groups and will usually try to escape on foot through undergrowth and avoid flying, though they will fly into tall trees to roost. The bird has a celebrated status in Indian mythology, and hence protected culturally in India especially in Gujarat. The Indian Peafowl is listed as Least Concern by IUCN (2014) Red data.

**Photographs of Peafowl**



# Shrey Industries



Male



Female

**Appearance:** The male, known as a peacock, is a large bird with a length from bill to tail of 100 to 115 cm (40 to 46 inches) and to the end of a fully grown train as much as 195 to 225 cm (78 to 90 inches) and weigh 4–6 kg. The females, or peahens, are smaller at around 95 cm (38 inches) in length and weigh 2.75– 4 kg. Indian Peafowl are among the largest and heaviest representatives of the Phasianidae family. Their size, colour and shape of crest make them unmistakable within their native distribution range. The male is metallic blue on the crown, the feathers of the head being short and curled. The fan shaped crest on the head is made of feathers with bare black shafts and tipped with blush-green webbing. A white stripe above the eye and a crescent shaped white patch below the eye are formed by bare white skin. The sides of the head have iridescent greenish blue feathers. The back has scaly bronze-green feathers with black and copper markings. The scapular and the wings are buff and barred in black, the primaries are chestnut and the secondaries are black. The tail is dark brown and the "train" is made up of elongated upper tail coverts (more than 200 feathers, the actual tail has only 20 feathers) and nearly all of these feathers end with an elaborate eye-spot. A few of the outer feathers lack the spot and end in a crescent shaped black tip. The underside is dark glossy green shading into blackish under the tail. The thighs are buff coloured. The male has a spur on the leg above the hind toe.

Peacocks are polygamous, and the breeding season is spread out but appears to be dependent on the rains. Several males may congregate at a lek site and these males are often closely related. Males at lek appear to maintain small territories next to each other and they allow females to visit them and make no attempt to guard harems. Females do not appear to favour specific males. Peafowl are omnivorous and eat seeds, insects, fruits, and reptiles. A large percentage of their

# Shrey Industries

---

food is made up of the fallen berries. Around cultivated areas; peafowl feed on a wide range of crops such as groundnut, tomato, paddy, etc. Around human habitations, they feed on a variety of food scraps. In the countryside, it is particularly partial to crops and garden plants.

## ***Status & impact in the Study Area:***

No peacock was sighted in the project site. All the direct sightings of the peacock were located near the human habitats, villages and agriculture field, of study area. This species is well adapted to natural village environment setting. Day time they temporarily move towards the surrounding agriculture areas for feeding while during night time they roost on the trees present in the village and in the agriculture hedges.

Since Indian Peafowl is a ground nester, several project activities can have adverse Impact on their nesting grounds such as pollution, degradation of soil and vegetation from surrounding area and in the forest areas. Direct disturbance by presence of people, vehicle their noise, vibration, light etc. can potentially disturb most of the bird species.

## ***Threats in the Study Area:***

No perceptible threats were identified in the study region, as

- Village residents are against hunting or poaching of the peafowl, due to culture and mythology reasons.
- Majority villagers follow Hinduism in the region, thus they have high respect towards peacocks due to mythological reasons, and
- Literacy levels are greater than 80% in the study region and people are aware with the significance of the peacock as the national bird.

**Conservation:** Following actions for the conservation and protection are suggested in wildlife conservation action plan to reduce impacts of project related activities on the species. Based on our field observation on the distribution, behavioural ecology, conservation need, and envisaged impacts of proposed project.

## **Conservation through Habitat Improvement and Awareness**

Habitat improvement programme can be undertaken through plantation of suitable tree species in the surrounding villages. While selecting the tree/ shrub species care shall be provided for beery plants which attract these birds. During summer period, villagers will be encouraged to use the old earthen pots to fill with water for drinking these birds.

## **Seed Distribution among the Villagers:**

# Shrey Industries

---

Summer is the time when these birds are facing shortage of feeds, there by supplying the feed like Bajri, Juwar, Maize to the surrounding villages with good population of Indian peafowls will suffice the problem of food shortage.

## **Conservation Measures with fund allocation:**

In consultation of the forest department, following conservation measures will be adapted for peacock conservation:

1. Increasing the tree cover in the study area which will provide shelter and roosting to the peacocks. This can be achieved by planting of local tree species like Neem, Shirish, Khakhro, Haldu, Amla, Banyan, Peepal and Peeper or other *Ficus sp.* Vacant places such as edges of agricultural fields, village Gauchar, Panchayat's common land, neighbourhood of people inhabiting, road side avenue tree plantation, open scrubs, ravines, school compounds can be selected for practicing the plantation activity.
2. School level awareness programmes will be conducted for conservation of peacocks in the study area by organizing competitions during "Wildlife Week" and "Van Mahotsav" celebrations by active involvement of local community.
3. Some provision of rewards to informers for the control of poaching and illegal trade in wildlife.
4. Carrying out census and research projects to know the potential threats and population status of the species in collaboration of local schools, colleges, panchayats and forest department.
5. Suggest strategies to minimize negative impacts of changing environment in nearby area of peacock populations and to promote conservation of peacock habitats.
6. Another way to help preserve the endangered species is to create society dedicated to ecological ethics. All the conservation measures will be implemented with the help of and in the consultation of the district forest department.

# Shrey Industries

The proponent has proposed a sum of **Rs. 220000/-** for the "Peacock" conservation plan under the following heads:

<b>Sr. No.</b>	<b>Work or Activity</b>	<b>Approximate Cost. Rs.</b>	<b>Village</b>
1	Plantation-350 tree plants (5 feet height as per the plant species-Cost of sapling will be changed per year)	70,000/-(@ 200/-per plant)	Dhanot and Indrad village
2	Small water tank-10 nos. @ 10000/-per tank	1,00,000/-	
3	One awareness programme for "Peacock" conservation	20,000/-	Study area
4	3 cash prizes @ 10000 in a year will be awarded to the informer of poachers.	30,000/-	
<b>Total</b>		<b>2,20,000/-</b>	

# Shrey Industries

## Annexure-II

### RESULTS OF WATER QUALITY IN THE STUDY AREA

#### Ground Water

No	Parameter	Unit	Project Site	Budasana	Indrad	Dhanot	Permissible Limit
<b>Sampling Date</b>							
1	pH	pH Unit	7.5	7.7	7.6	7.1	6.5-8.5
2	Colour	--	Colourless	Colourless	Colourless	Colourless	--
3	Odour	--	Odourless	Odourless	Odourless	Odourless	--
4	Turbidity	NTU	< 1	< 1	< 1	< 1	10
5	TDS	mg/L	1078	1033	1097	969	2000
6	Total Hardness	mg/L	290	298	270	238	600
7	Calcium	mg/L	56.1	53.7	56.1	49.7	--
8	Magnesium	mg/L	36.5	39.9	31.6	27.7	--
9	Sodium	mg/L	260	250	280	230	--
10	Potassium	mg/L	12	13	15	9	--
11	Chloride	mg/L	402.6	328.02	368.5	309.1	1000
12	Sulphate	mg/L	62.8	41	44.1	45	400
13	Phenolic Compound	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	0.002
14	Fluoride	mg/L	0.69	0.79	0.84	0.5	1.5
15	Mineral Oil	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	0.03
16	Suspended Solids	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	--
17	COD	mg/L	< 4	< 4	< 4	< 4	--
18	BOD	mg/L	< 2	< 2	< 2	< 2	--
19	Ammonical Nitrogen	mg/L	< 1	< 1	< 1	< 1	--
20	Alkalinity	mg/L	350	430	340	390	600
21	Copper	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	1.5
22	Nitrate	mg/L	6.1	7.3	5.7	5	45
23	Phosphate	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	--
24	Iron	mg/L	0.27	0.23	0.13	0.19	1.0
25	Mercury	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	0.001
26	Cadmium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.01
27	Arsenic	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.01
28	Lead	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.05
29	Chromium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.05
30	Total Coliform	-	< 2	< 2	< 2	< 2	10/100ml

# Shrey Industries

## Ground Water

No	Parameter	Unit	Julasan	Ambav pura	Chada sana	Bileshwa rpura	Permissible Limit
<b>Sampling Date</b>							
1	pH	pH Unit	7.9	7.5	7.5	7.9	6.5-8.5
2	Colour	--	Colourless	Colourless	Colourless	Colourless	--
3	Odour	--	Odourless	Odourless	Odourless	Odourless	--
4	Turbidity	NTU	< 1	< 1	< 1	< 1	10
5	TDS	mg/L	1045	1019	980	1092	2000
6	Total Hardness	mg/L	296	262	272	282	600
7	Calcium	mg/L	56.1	45.7	55.3	56.1	--
8	Magnesium	mg/L	38.0	36.0	32.6	34.6	--
9	Sodium	mg/L	250	220	240	260	--
10	Potassium	mg/L	11	8	11	13	--
11	Chloride	mg/L	321.2	262.46	312.4	309.32	1000
12	Sulphate	mg/L	66.6	48	65.9	69	400
13	Phenolic Compound	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	0.002
14	Fluoride	mg/L	0.87	0.74	0.68	0.61	1.5
15	Mineral Oil	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	0.03
16	Suspended Solids	mg/L	< 0.5	< 0.5	< 0.5	< 0.5	--
17	COD	mg/L	< 4	< 4	< 4	< 4	--
18	BOD	mg/L	< 2	< 2	< 2	< 2	--
19	Ammonical Nitrogen	mg/L	< 1	< 1	< 1	< 1	--
20	Alkalinity	mg/L	430	400	360	390	600
21	Copper	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	1.5
22	Nitrate	mg/L	9.4	10.6	5.9	5.1	45
23	Phosphate	mg/L	< 0.1	< 0.1	< 0.1	< 0.1	--
24	Iron	mg/L	0.22	0.23	0.21	0.25	1.0
25	Mercury	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	0.001
26	Cadmium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.01
27	Arsenic	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.01
28	Lead	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.05
29	Chromium	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	0.05
30	Total Coliform	-	< 2	< 2	< 2	< 2	10/100ml

# Shrey Industries

## Surface water

No	Parameter	Unit	Narmada	Chhatral Pond	Budasan Pond	Permissible Limit
<b>Sampling Date</b>						
1	pH	pH Unit	7.8	8	7.8	6.5-8.5
2	Colour	--	Colourless	8.4	5.1	--
3	Odour	--	Odourless	Odourless	Odourless	--
4	Turbidity	NTU	< 1	1.2	2.4	10
5	TDS	mg/L	386	1520	904	2000
6	Total Hardness	mg/L	106	246	150	600
7	Calcium	mg/L	24.0	53.7	36.0	--
8	Magnesium	mg/L	11.2	27.2	14.6	--
9	Sodium	mg/L	88	370	240	--
10	Potassium	mg/L	7	18	15	--
11	Chloride	mg/L	109.34	490.49	287.1	1000
12	Sulphate	mg/L	19.7	92.2	40.3	400
13	Phenolic Compound	mg/L	< 0.002	< 0.002	< 0.002	0.002
14	Fluoride	mg/L	< 0.02	0.38	0.38	1.5
15	Mineral Oil	mg/L	< 0.02	1	0.8	0.03
16	Suspended Solids	mg/L	< 0.5	20	13	--
17	COD	mg/L	< 4	44	24	--
18	BOD	mg/L	< 2	10.4	< 5	--
19	Ammonical Nitrogen	mg/L	< 1	< 1	< 1	--
20	Alkalinity	mg/L	150	340	280	600
21	Copper	mg/L	< 0.001	< 0.001	< 0.001	1.5
22	Nitrate	mg/L	1.4	18.7	15.6	45
23	Phosphate	mg/L	< 0.1	< 0.1	< 0.1	--
24	Iron	mg/L	< 0.1	< 0.1	< 0.1	1.0
25	Mercury	mg/L	< 0.001	< 0.001	< 0.001	0.001
26	Cadmium	mg/L	< 0.005	< 0.005	< 0.005	0.01
27	Arsenic	mg/L	< 0.005	< 0.005	< 0.005	0.01
28	Lead	mg/L	< 0.005	< 0.005	< 0.005	0.05
29	Chromium	mg/L	< 0.005	< 0.005	< 0.005	0.05
30	Total Coliform	-	< 2	700	800	10/100ml

# Shrey Industries

Validation/Check the correctness of measured TDS as per the "Standard Method for Water and Waste Water Analysis, 23<sup>rd</sup> Addition, Section-1030 E, Page no- 1-23 & 1 24".

## Ground water

	<b>Project Site</b>	<b>Budasana</b>	<b>Indrad</b>	<b>Dhanot</b>	<b>Julasan</b>	<b>Ambav pura</b>	<b>Chada sana</b>	<b>Bileshwar pura</b>
Measured TDS	1078	1033	1097	969	1045	1019	980	1092
Calculate TDS*	1046.79	991.71	1005.84	910	1011.17	871.5	939.78	981.73
Acceptable ratio** 1.0 >Ratio<1.0	<b>1.030</b>	<b>1.042</b>	<b>1.091</b>	<b>1.065</b>	<b>1.033</b>	<b>1.169</b>	<b>1.043</b>	<b>1.112</b>

## Surface water

	<b>Narmada Canal</b>	<b>Chhatral Pond</b>	<b>Budasan Pond</b>
Measured TDS	386	1520	904
Calculate TDS*	350.66	1274.67	816.98
Acceptable ratio** 1.0 >Ratio<1.0	<b>1.101</b>	<b>1.192</b>	<b>1.107</b>

\*  $TDS = 0.6(\text{Alkalinity}) + Na^+ + K^+ + Ca^{+2} + Mg^{+2} + Cl^- + SO_4^{-2} + NO_3^- + F^-$

\*\*  
 $1.0 < \frac{\text{Measured TDS}}{\text{Calculated TDS}} < 1.2$